

AMENDMENTS TO THE CLAIMS:

Without prejudice, this listing of the claims replaces all prior versions and listings of the claims in the present application:

LISTING OF THE CLAIMS:

1. (Currently Amended) A method for operating an internal combustion engine, the internal combustion engine having a compressor to compress air supplied to the internal combustion engine, the method comprising:

measuring an actual pressure ratio across the compressor for diagnosing a compression;

comparing the measured actual pressure ratio to a modeled actual pressure ratio; and

detecting an error as a function of a result of the comparing of the ratios, wherein the error is used to operate the internal combustion engine.

2. (Previously Presented) The method as recited in claim 1, wherein the modeled actual pressure ratio is the setpoint pressure ratio across the compressor.

3. (Previously Presented) The method as recited in claim 1, wherein the modeled actual pressure ratio is determined based on at least one engine parameter.

4. (Original) The method as recited in claim 3, wherein the modeled actual pressure ratio is determined as a function of an engine speed and an air mass flow rate.

5. (Original) The method as recited in claim 2, wherein the compressor is an electrically operated supercharger.

6. (Original) The method as recited in claim 5, wherein the diagnosis is performed in one of an idling state and a near-idling state.

7. (Previously Presented) A method for diagnosing operation of an internal combustion engine having a compressor for compression of air supplied to the internal combustion engine, comprising:

measuring an actual pressure ratio across the compressor;

comparing the measured actual pressure ratio with a predetermined reference value;
and
detecting an error as a function of the result of the comparison;
wherein the predetermined reference value is a setpoint pressure ratio across the
compressor,
wherein the compressor is an electrically operated supercharger, and
wherein the electrically operated supercharger is triggered in a defined manner, as
part of an early run-up.

8. (Previously Presented) A method for diagnosing operation of an internal combustion engine having a compressor for compression of air supplied to the internal combustion engine, comprising:

measuring an actual pressure ratio across the compressor;
comparing the measured actual pressure ratio with a predetermined reference value;
and
detecting an error as a function of the result of the comparison;
wherein the predetermined reference value is a setpoint pressure ratio across the
compressor,
wherein the compressor is an electrically operated supercharger,
wherein the diagnosis is performed in one of an idling state and a near-idling state,
and
wherein the electrically operated supercharger is triggered in a defined manner, as
part of an early run-up.

9. (Original) The method as recited in claim 8, wherein a divert air valve is closed for the diagnosis.

10. (Original) The method as recited in claim 2, wherein the compressor is one of an exhaust gas turbocharger and a supercharger.

11. (Original) The method as recited in claim 3, wherein the compressor is an electrically operated supercharger.

12. (Original) The method as recited in claim 11, wherein the diagnosis is performed in one of an idling state and a near-idling state.

13. (Previously Presented) A method for diagnosing operation of an internal combustion engine having a compressor for compression of air supplied to the internal combustion engine, comprising:

measuring an actual pressure ratio across the compressor;
comparing the measured actual pressure ratio with a predetermined reference value;
and
detecting an error as a function of the result of the comparison;
wherein the predetermined reference value is a modeled actual pressure ratio determined based on at least one engine parameter,
wherein the compressor is an electrically operated supercharger, and
wherein the electrically operated supercharger is triggered in a defined manner, as part of an early run-up.

14. (Previously Presented) A method for diagnosing operation of an internal combustion engine having a compressor for compression of air supplied to the internal combustion engine, comprising:

measuring an actual pressure ratio across the compressor;
comparing the measured actual pressure ratio with a predetermined reference value;
and
detecting an error as a function of the result of the comparison;
wherein the predetermined reference value is a modeled actual pressure ratio determined based on at least one engine parameter,
wherein the compressor is an electrically operated supercharger,
wherein the diagnosis is performed in one of an idling state and a near-idling state,
and
wherein the electrically operated supercharger is triggered in a defined manner, as part of an early run-up.

15. (Original) The method as recited in claim 14, wherein a divert air valve is closed for the diagnosis.

16. (Original) The method as recited in claim 3, wherein the compressor is one of an exhaust gas turbocharger and a supercharger.

17. (Previously Presented) A device for operating an internal combustion engine, the internal combustion engine having a compressor to compress air supplied to the internal combustion engine, the device comprising:

- a determining arrangement, for diagnosing a compression, to determine an actual pressure ratio across the compressor from variables measured by a measuring arrangement;

- a comparing arrangement to compare the actual pressure ratio with a modeled actual pressure ratio; and

- an error detecting arrangement to detect an error as a function of a result of the comparing.

18. (Previously Presented) A device for operating an internal combustion engine, the internal combustion engine having a compressor to compress air supplied to the internal combustion engine, the device comprising:

- a determining arrangement, for diagnosing a compression, to determine an actual pressure ratio across the compressor from variables measured by a measuring arrangement;

- a comparing arrangement to compare the actual pressure ratio with a setpoint pressure ration that is to be set; and

- an error detecting arrangement to detect an error as a function of a result of the comparing.

19. (Previously Presented) A method for operating an internal combustion engine, the internal combustion engine having a compressor to compress air supplied to the internal combustion engine, the method comprising:

- measuring an actual pressure ratio across the compressor for diagnosing a compression;

- comparing the measured actual pressure ratio with a setpoint pressure ratio that is to be set; and

- detecting an error as a function of a result of the comparing.